

August 5, 2003
Application No. 09/848,904

REMARKS/ ARGUMENTS

Favorable reconsideration of this application is requested in view of the amendments above and the remarks/arguments which follow:

Disposition of the Claims

Claims 1-17, 19-29, 31, 34, 35 are pending in this application. Claims 18, 30, 32, and 33 have been cancelled. Claims 34, 35 have been added.

Objections to the Specification

The Examiner objected to the disclosure because of a blank reference to another U.S. application on page 7, lines 23 and 24. The informalities on page 7, lines 23 and 24 have been corrected as shown in the replacement paragraph above. Withdrawal of this objection is respectfully requested.

Objections to the Claims

The Examiner objected to claim 19 under 37 CFR §1.75 for being a substantial duplicate of claim 18. Claim 18 has been cancelled. Withdrawal of this objection is respectfully requested.

Rejections Under 35 U.S.C. §112

Claims 1-31 and 33 are rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the listed perfluorinated groups, does not reasonably provide enablement for all the numerous possible perfluorinated groups. Reconsideration of this rejection is respectfully requested.

The claims have been amended to limit the perfluorinated groups to perfluorinated carbon groups having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. It is believed that the claims as amended are enabled by the specification. Withdrawal of the rejection of claims 1-31 and 33 under 35 U.S.C. §112, first paragraph, is requested.

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Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 32 has been cancelled. Accordingly, rejection of claim 32 is moot.

Rejections under 35 U.S.C. §102

Claims 1, 2, 4-11, 14-20, 22-27, 29-31, and 33 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by Rau et al. (U.S. Patent No. 4,162,908). Claims 18, 30, and 33 have been cancelled. Accordingly, rejection of these claims is moot. Reconsideration of the rejection of claims 1, 2, 4-11, 14-17, 19, 20, 22-27, 29, and 31 is respectfully requested.

Amended claims 1 and 19 recite a method for making silica and fused silica, respectively, which comprises delivering a silica precursor comprising at least one perfluorinated carbon group (R_F) having a carbon atom bonded directly or through an intermediate oxygen atom to silicon to a conversion site. Amended claim 29 recites a method for making silica which comprises delivering a silica precursor comprising at least one perhalogenated carbon group (R_z) having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. Rau et al. disclose the silica precursors $SiCl_4$, $SiCl_3F$, $SiCl_2F_2$, and $SiClF_3$, none of which is a perfluorinated carbon group or a perhalogenated carbon group having a carbon atom bonded directly or through an intermediate oxygen atom to silicon.

In view of the above, claims 1, 19, and 29, as amended, are not anticipated by Rau et al. Withdrawal of the rejection of claims 1, 19, and 29 is respectfully requested. Claims 2, 4-11, 14-17, 20, 22-27, being dependent from one of claims 1, 19, and 29, are likewise patentable in view of the foregoing arguments.

Claims 12 and 28 are rejected under 35 USC §102(b) as being clearly anticipated by figure 2 of EP 0208086 A1. Reconsideration of this rejection is respectfully requested.

The EP 0208086 A1 reference does not disclose making of silica or fused silica using a silica precursor comprising at least one perfluorinated carbon group (R_F) having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. Therefore, the EP 0208086 A1 reference cannot anticipate claims 12 and 28, which depend from claims that recite making of silica or fused silica using a silica precursor comprising at least one perfluorinated carbon group

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(R_F) having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. Withdrawal of the rejection of claims 12 and 28 is respectfully requested.

Rejections Under 35 U.S.C. §103

Claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Rau et al. in view of Guerder et al. (U.S. Patent No. 4,367,013). Reconsideration of this rejection is respectfully requested.

Amended claim 1 recites a method of making silica using a silica precursor comprising at least one perfluorinated carbon group having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. Rau et al. do not disclose a silica precursor comprising at least one perfluorinated carbon group having a carbon atom bonded directly or through an intermediate oxygen atom to silicon. Guerder et al. also fail to overcome this deficiency in the Rau et al. patent. Therefore, claim 1 is not obvious over Rau et al. in view of Guerder et al. Because claim 1 is not obvious over Rau et al. in view of Guerder et al., claim 13, which depends from claim 1, is also not obvious over Rau et al. in view of Guerder et al. Withdrawal of the rejection of claim 13 over these references is respectfully requested.

New Claims

New claim 34 further limits the perfluorinated carbon group recited in claim 1 to a perfluorinated alkyl group having carbon atoms ranging from 1 to 5, where all valences except for C-C, Si-C, or C-O linkages are satisfied by fluorine.

New claim 35 further limits the perhalogenated carbon group recited in claim 1 to a perfluorinated alkyl group having carbon atoms ranging from 1 to 5, where all valences except for C-C, Si-C, or C-O linkages are satisfied by halogens.

Conclusion

The rejected claims have been amended and/or shown to be allowable over the prior art. Applicants believe that this paper is fully responsive to each and every ground of rejection cited by the Examiner in the Office Action designated Paper No. 6, and respectfully request that a timely Notice of Allowance be issued in this case.

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A petition under MPEP §710.06 to reset period for reply to three months from July 18, 2003, due to late receipt of office action was filed in the above-identified application on July 29, 2003. Applicants believe that the petition would be granted and that no time extension fee would be necessary to file this response. However, should the Patent and Trademark Office determine that a fee is necessary for filing this response, the Patent and Trademark Office is authorized to charge any necessary fee or surcharge to the Deposit Account 03-3325.

Respectfully submitted,

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